

Massachusetts Health Care Cost Trends

Health Care Quality and Cost Council

May 26, 2011



DIVISION OF
Health Care
Finance and Policy

Overview of the Cost Trends Project

- Chapter 305 of the Acts of 2008 requires DHCFP to conduct an annual study of health care cost trends in the Commonwealth, and the factors that contribute to cost growth.
- In collaboration with the Office of the Attorney General, DHCFP will convene four days of public hearings from June 27 – 30.
- Shortly after the hearings, DHCFP will release a final report with recommendations to increase the efficiency of the health care system.

Public Hearings – Framework

- The hearings will examine challenges faced by the growth in health care costs, progress made to-date by existing public and private efforts, and opportunities for further innovation.
- The hearings will begin with a discussion of health care cost trends, and then present factors underlying its growth within the framework of five topical categories:
 - provider price variation;
 - payment methodologies;
 - health resource planning;
 - integration and care coordination; and
 - role of government and market.
- Witnesses will provide testimony under oath and are subject to examination and cross examination by DHCFP and the Attorney General.

Preliminary Reports

- Today, DHCFP released two preliminary reports related to health care cost trends:
 - *Premium Levels and Trends in Private Health Plans: 2007-2009*
 - *Price Variation in Massachusetts Health Care Services*
 - *Trends in Health Care Expenditures* (pending)
- Project Team
 - Freedman HealthCare
 - Mathematica Policy Research
 - Oliver Wyman Actuarial Consulting, Inc.
- These reports will serve as a basis for both the discussion at the public hearings and the development of strategies to mitigate growth in health care spending in Massachusetts.

Premium Levels and Trends in Private Health Plans: 2007-2009

DHCFP analyzed:

- Enrollee demographics in the Massachusetts commercial markets
- Trends in premiums paid by employers and consumers for health insurance
- Medical expenses and retention included in those premiums
- Impact of premium trends on the health insurance purchasing decisions of employers and individuals

Key Findings

- Premiums increased 5 to 9 percent per year from 2007-2009, when adjusted for benefits and demographics
- Smaller groups paid higher premiums than mid-size and large groups and small groups experienced greater premium volatility
- On average, the level of benefit coverage has declined and member cost-sharing has increased; most notable in the small group market
- Medical loss ratios overall increased from 89% to 91% (2008-2009); although medical loss ratios were above 100% for individual market
- Preliminary data for 2010 indicate that medical loss ratios decreased to 89% in light of slowed increase in medical claims expenditures

Adjusted premiums increased 5 to 9%; actual premium increases were lower before benefit buy-down

- From 2007 to 2009, private group health insurance premiums in MA increased roughly 5 to 9 percent annually, when adjusted for benefits and demographics.
- This compares to CPI-U increases of 1.7 percent annually nationwide and 2.0 percent in the Northeast.

Unadjusted Premium PMPM – Percent Change

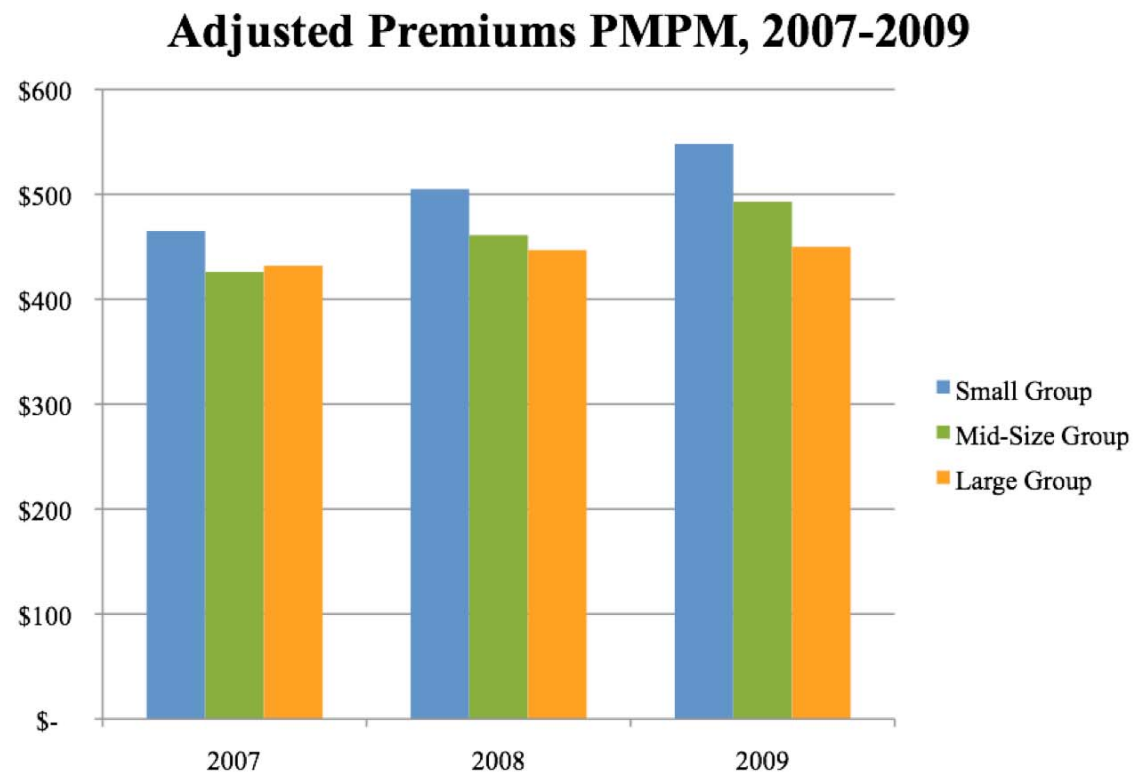
	2007-2008	2008-2009
Small Group	5.8%	2.2%
Mid-Size Group	5.2%	5.6%
Large Group	6.1%	4.3%

Adjusted Premium PMPM – Percent Change

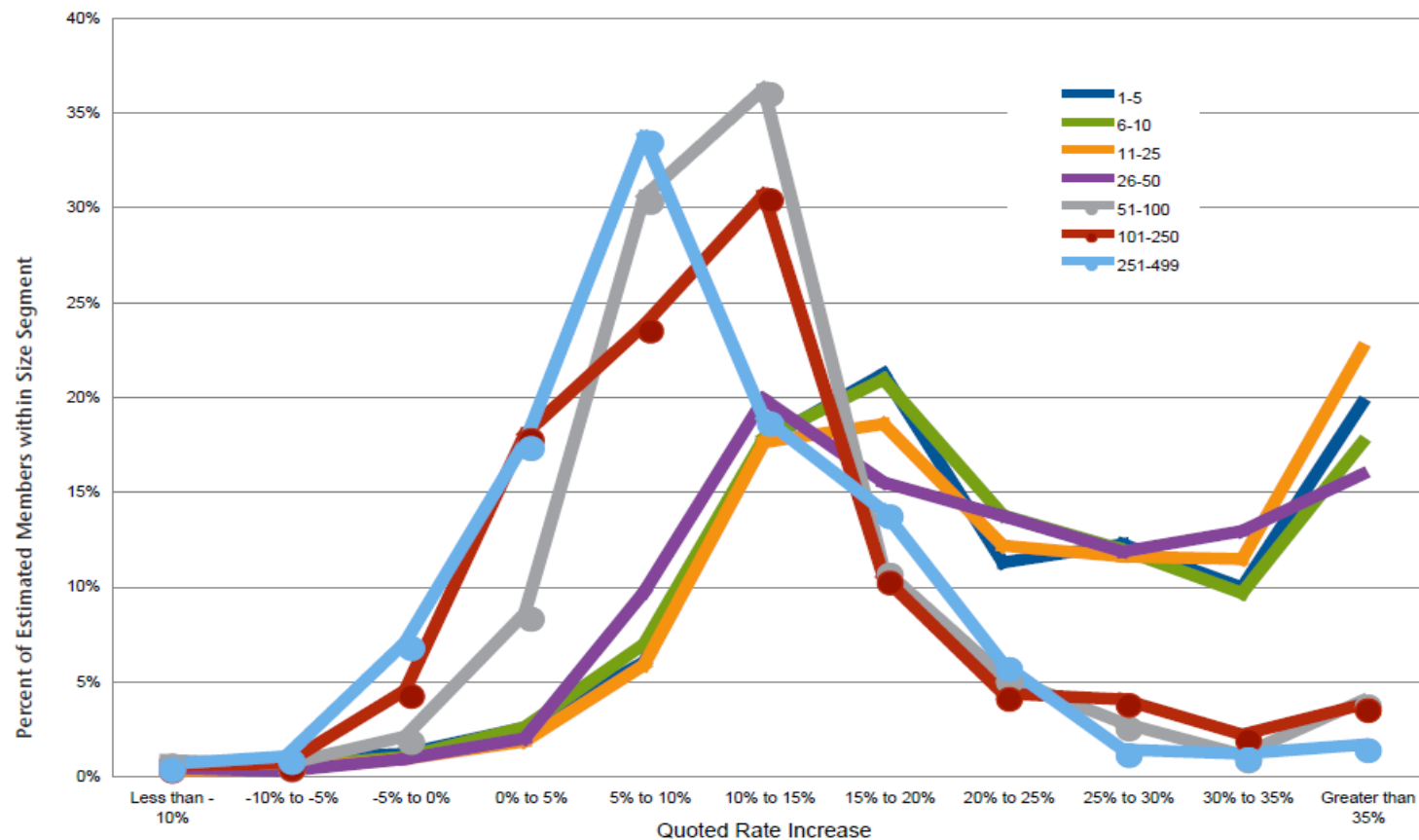
	2007-2008	2008-2009
Small Group	8.8%	8.5%
Mid-Size Group	5.8%	6.5%
Large Group	6.0%	5.1%

Small group premiums were higher than mid-size and large groups

- Smaller groups paid higher premiums from 2007 to 2009 than mid-size and large groups, when adjusted for demographics, geographic area, and benefits.
- It is important to note that premium increases for specific employers may vary significantly from the average.

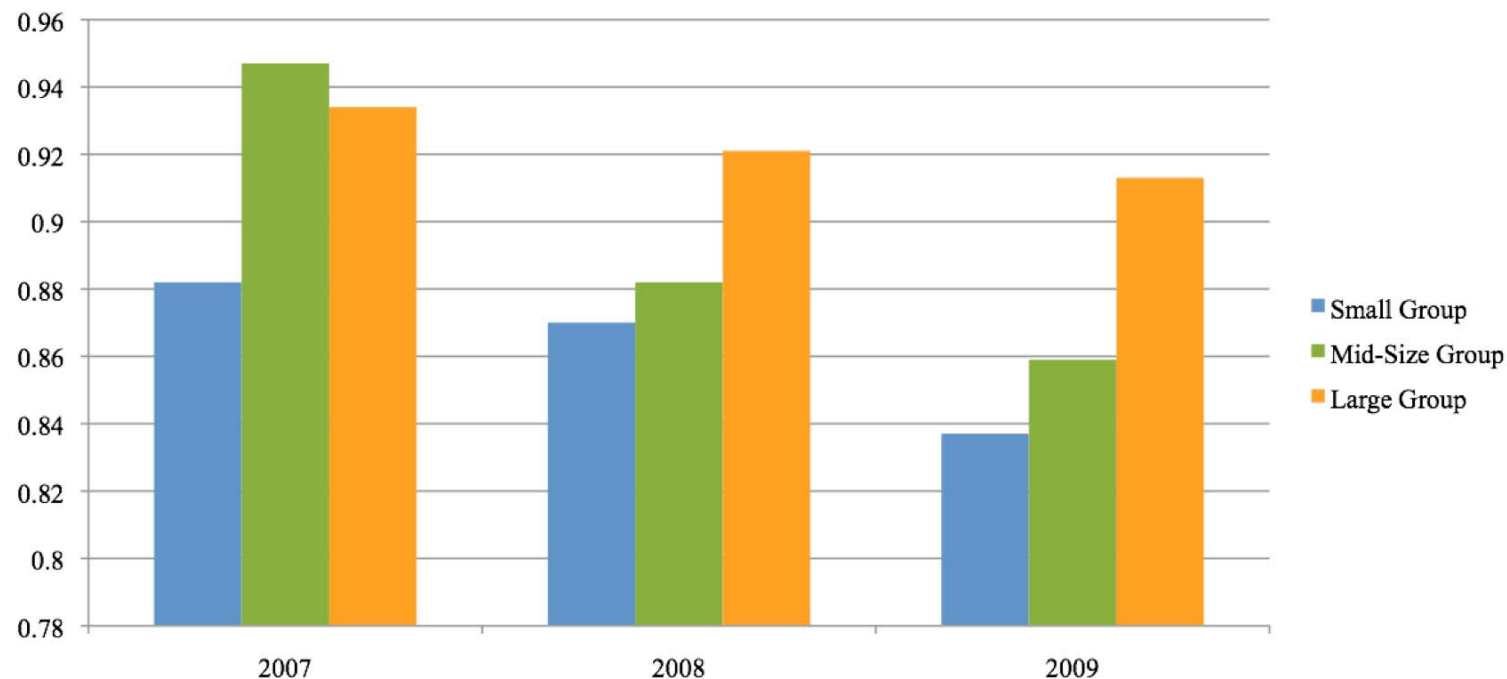


Greater premium volatility for small groups; more members affected by large increases in 2009



Benefit coverage levels declining and member cost-sharing increasing in all markets

**Median Actuarial Value for Most Popular HMO Product
by Group Size, 2007-2009**



Medical loss ratios increased to 91% in 2009

- From 2007 to 2009, the medical loss ratio calculated across all group sizes increased from 88 percent to 91 percent. MLRs are greatest for individuals.

	2007			2008			2009		
	Premiums (billions)	Claims (billions)	Loss Ratio	Premiums (billions)	Claims (billions)	Loss Ratio	Premiums (billions)	Claims (billions)	Loss Ratio
Individual Pre-Merger Products	\$0.2	\$0.2	96.0%	\$0.1	\$0.1	95.2%	\$0.0	\$0.0	103.1%
Individual Post-Merger Products	\$0.1	\$0.1	105.6%	\$0.2	\$0.3	111.6%	\$0.4	\$0.4	108.9%
Individual Total	\$0.3	\$0.3	98.1%	\$0.3	\$0.4	107.1%	\$0.4	\$0.4	108.4%
Small Group	\$2.9	\$2.5	86.7%	\$2.9	\$2.5	86.5%	\$2.8	\$2.5	87.8%
Merged Market Total	\$2.9	\$2.6	87.1%	\$3.2	\$2.8	88.5%	\$3.1	\$2.8	90.1%
Mid-Size Group	\$3.2	\$2.8	86.9%	\$3.3	\$2.9	87.7%	\$3.4	\$3.0	89.9%
Large Group	\$2.5	\$2.2	89.5%	\$2.4	\$2.2	89.4%	\$2.4	\$2.2	92.0%
Total	\$8.9	\$7.8	87.9%	\$9.0	\$8.0	88.5%	\$8.9	\$8.1	90.6%

Preliminary 2010 data show a decrease in MLR, in part due to slowdown in claims expenditures

- Medical loss ratios across all market segments combined, as reported in carrier financial statements, decreased from 90.5 percent in 2009 to 89.4 percent in 2010.
- The decrease in medical loss ratio from 2009 to 2010 appears to be the result of a slowing trend in medical expenditures, both locally and nationally. Claims expenditures do not take into account increasing member cost-sharing.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average 2002-2010
Medical Loss Ratios	86.6%	85.7%	86.3%	85.6%	86.7%	88.0%	88.7%	90.5%	89.4%	87.6%
Claim Expenditures, PMPM	\$ 194	\$ 214	\$ 236	\$ 257	\$ 281	\$ 306	\$ 326	\$ 346	\$ 359	\$ 274
% Annual Increase in Claim Expenditures, PMPM	-	11.7%	10.0%	9.0%	9.6%	8.9%	6.3%	6.3%	3.7%	8.2%

Price Variation in Massachusetts Health Care Services

DHCFP analyzed:

- Prices paid by private health plans for commercially insured members in inpatient hospital care, outpatient hospital care, and physician and other professional services
- Prices paid by commercial carriers are compared to rates paid by Medicaid and Medicare
- Variation in the quality scores of hospitals for existing quality measures that can be directly related to the selected inpatient services
- Potential impact of various models that reduce or eliminate the current level of price variation
- Report includes main report plus detailed methodological appendix and statistical appendix

Price Variation – Key Findings

- The highest paid hospitals received payments that were between 50% to over 100% higher than the lowest paid hospitals for the same services
- Service volume tends to be concentrated in the higher paid hospitals
- There is little measurable variation among hospitals based on available quality metrics specific to the selected inpatient services; however price variation for those same services is wide
- Medicaid and Medicare rates were consistently lower than the prices paid by private payers with a few exceptions
- There was no correlation between a hospital's share of Medicaid patients and the prices they received from private payers
- The variation in Medicare prices was similar in breadth to that found for private payers; however the hospitals' relative price rankings were not similar

Price Variation – Methodological Overview

- Prices include 2009 claims payments as well as co-payments and deductibles
- Inpatient prices are calculated both statewide and at hospital-specific levels; hospital-specific prices are severity adjusted median prices and computed where there are at least 30 discharges
- 14 DRGs (that make up 40% of inpatient payments) and 20 physician/professional CPT codes (that make up 32% of physician payments) are analyzed
- Composite quality measures are specifically tailored to each DRG
- Comparisons of private payer prices to Medicaid and Medicare rates use public payer fee schedules; Medicaid SPAD rates are converted to DRG specific rates

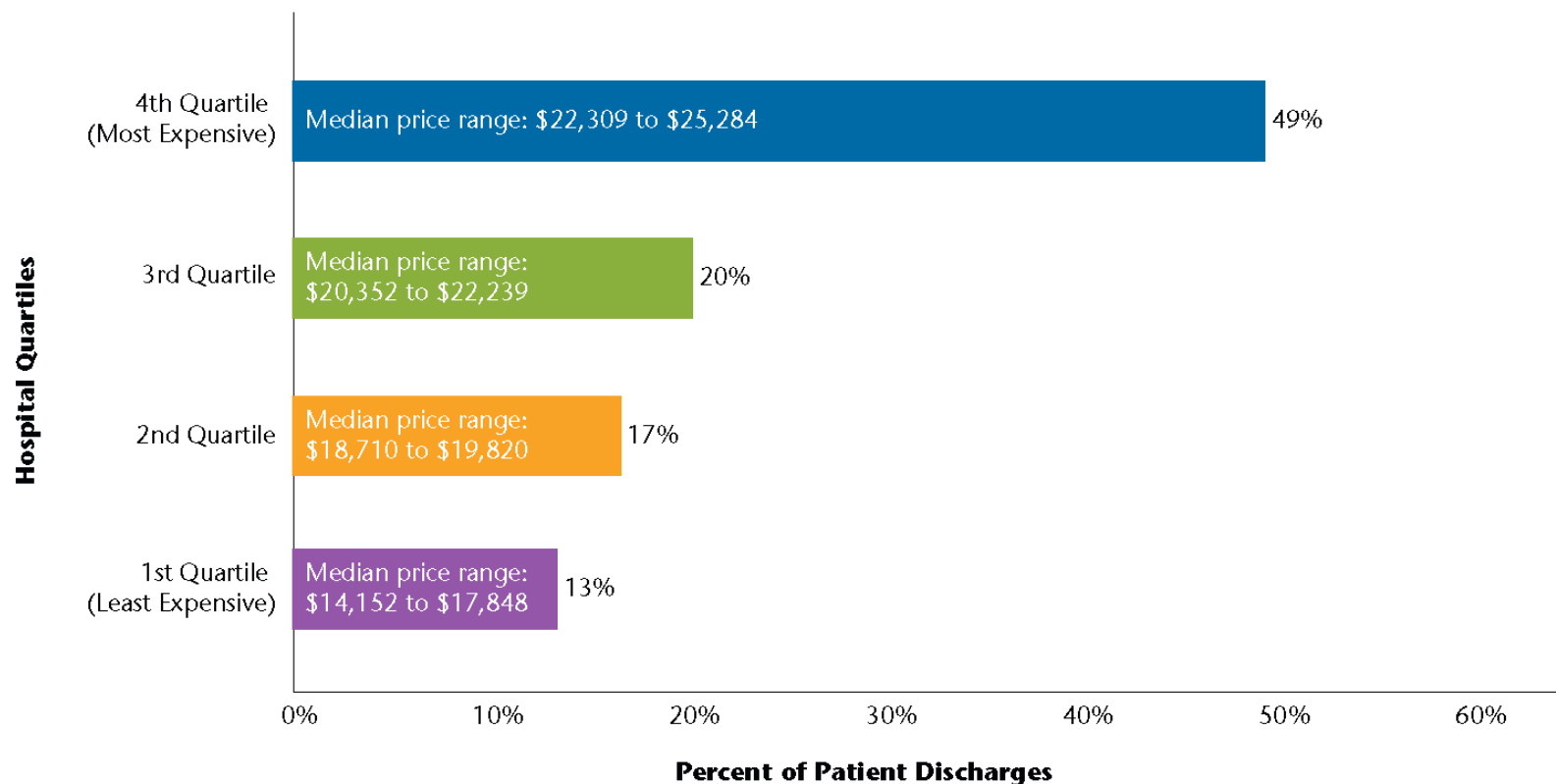
Prices paid to hospitals for the same services vary by 50% to more than 100%

DRG	Price Relativity	
	Minimum	Maximum
Pneumonia (DRG 139)	0.75	1.26
Chronic Obstructive Pulmonary Disease (DRG 140)	0.78	1.30
Acute Myocardial Infarction (DRG 190)	0.67	1.32
Congestive Heart Failure (DRG 194)	0.79	1.04
Appendectomy (DRG 225)	0.75	1.46
Laparoscopic Cholecystectomy (DRG 263)	0.75	1.30
Hip Joint Replacement (DRG 301)	0.87	1.18
Knee Joint Replacement (DRG 302)	0.71	1.28
Intervertebral disc excision and decompression (DRG 310)	0.70	1.17
Knee and lower leg procedures (DRG 313)	0.73	1.18
Procedures for obesity (DRG 403)	0.74	1.32
Uterine and adnexa procedures for non-malignancy except leiomyoma (DRG 513)	0.72	1.21
Cesarean delivery (DRG 540)	0.70	1.49
Vaginal delivery (DRG 560)	0.76	1.37

Hospital Price Relativity for Knee Joint Replacement (DRG 302)

Severity-Adjusted Median Price Percentile	Hospitals by Percentile of Severity-Adjusted Median Prices	Number of Admissions	Percent (%) of Statewide Admissions	Total Payments	Percent (%) of Total Payments	Median Severity-Adjusted Price	Price Relativity
0-10	Lowell General Hospital	36	1.53	\$567,450	1.10	\$14,153	0.71
0-10	Saint Vincent Hospital	31	1.31	\$526,468	1.02	\$16,046	0.81
0-10	Caritas Holy Family Hospital	30	1.27	\$525,907	1.02	\$16,771	0.85
11-20	Emerson Hospital	26	1.10	\$451,174	0.87	\$16,910	0.85
11-20	Falmouth Hospital	52	2.20	\$1,087,399	2.10	\$17,249	0.87
21-25	Winchester Hospital	52	2.20	\$996,890	1.93	\$17,830	0.90
21-25	Northeast Health Systems	91	3.86	\$1,713,230	3.32	\$17,848	0.90
26-50	Cape Cod Hospital	47	1.99	\$961,988	1.86	\$18,710	0.94
26-50	Caritas Good Samaritan Hospital	42	1.78	\$809,112	1.57	\$18,772	0.95
26-50	Jordan Hospital	33	1.40	\$638,221	1.24	\$18,788	0.95
26-50	Baystate Medical Center	118	5.00	\$2,449,222	4.74	\$19,375	0.98
26-50	Newton Wellesley Hospital	110	4.66	\$2,273,375	4.40	\$19,671	0.99
26-50	Southcoast Health Systems Charlton	44	1.87	\$974,935	1.89	\$19,820	1.00
51-75	Mount Auburn Hospital	61	2.59	\$1,244,966	2.41	\$20,352	1.03
51-75	South Shore Hospital	93	3.94	\$2,225,018	4.31	\$20,506	1.03
51-75	Lahey Clinic	73	3.09	\$1,498,039	2.90	\$21,091	1.06
51-75	North Shore Medical Center	107	4.54	\$2,316,882	4.48	\$21,317	1.08
51-75	U Mass Memorial Medical Center	78	3.31	\$1,802,337	3.49	\$21,952	1.11
51-75	Faulkner Hospital	68	2.88	\$1,573,668	3.05	\$22,239	1.12
76-80	New England Baptist Hospital	678	28.74	\$14,467,912	28.00	\$22,309	1.13
81-100	Southcoast Health Systems St. Luke's	39	1.65	\$907,558	1.76	\$23,678	1.19
81-100	Beth Israel Deaconess Medical Center	63	2.67	\$1,555,456	3.01	\$23,821	1.20
81-100	Sturdy Memorial Hospital	30	1.27	\$762,849	1.48	\$24,127	1.22
81-100	Massachusetts General Hospital	129	5.47	\$3,252,759	6.30	\$24,913	1.26
81-100	Brigham & Women's Hospital	228	9.67	\$6,088,060	11.78	\$25,284	1.28

Most volume occurs at hospitals in top quartile of hospital prices. Example: knee surgery

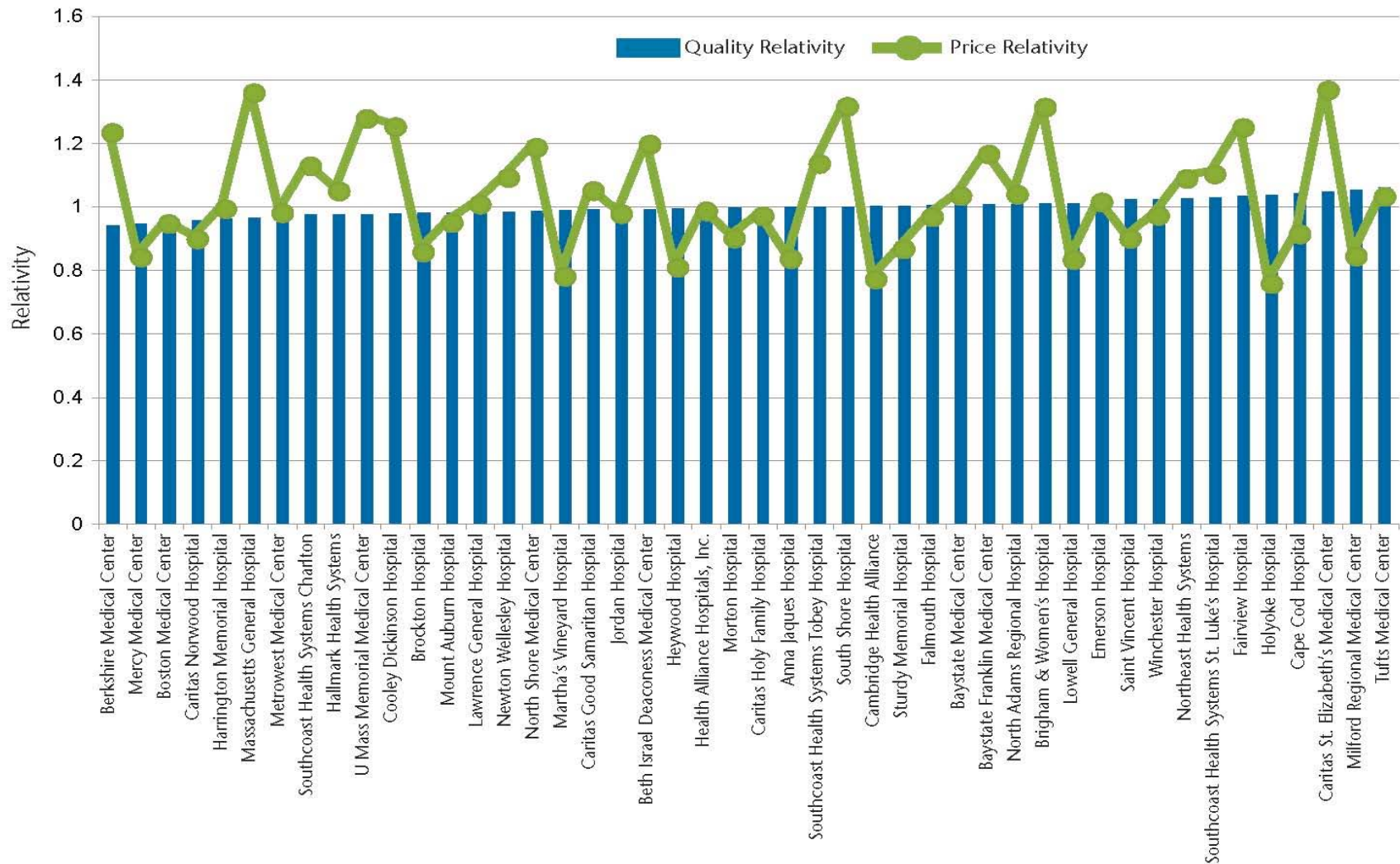


Potential Savings Scenarios with Decreased Price Variation

APR-DRG	All payments made at the median	Payments above the 80th percentile reduced to the 80th percentile	All payments made between the 20th and 80th percentile	Payments below the 20th percentile increased to the 20th percentile
Total, all selected DRGs				
Percent change in payments	-3.3%	-5.0%	-2.6%	2.4%
Selected surgical DRGs				
Laparoscopic cholecystectomy (263)	-2.1%	-4.7%	-1.1%	3.6%
Procedures for obesity (403)	1.2%	-3.2%	-0.7%	2.4%
Uterine and adnexa procedures for nonmalignancy except leiomyoma (513)	-0.8%	-3.8%	-1.1%	2.7%
Appendectomy (225)	-3.1%	-5.9%	-2.1%	3.7%
Selected DRGs related to musculoskeletal procedures				
Knee joint replacement (302)	-2.1%	-5.1%	-3.1%	2.1%
Intervertebral disc excision and decompression (310)	-2.7%	-5.8%	-2.7%	3.1%
Knee and lower leg procedures (313)	-2.9%	-4.6%	-1.7%	3.0%
Hip joint replacement (301)	1.1%	-4.5%	-2.5%	2.0%
Selected medical DRGs				
Chronic obstructive pulmonary disease (140)	-8.0%	-7.1%	-4.9%	2.2%
Pneumonia (139)	-6.1%	-7.9%	-5.2%	2.8%
Acute myocardial infarction (190)	-12.1%	-10.9%	-8.3%	2.6%
Congestive heart failure (194)	-7.9%	-9.3%	-5.6%	3.7%
Selected maternity DRGs				
Cesarean delivery (540)	-5.0%	-4.5%	-2.5%	2.0%
Vaginal delivery (560)	-4.9%	-4.2%	-2.1%	2.1%

If the range in private payer price variation among hospital inpatient services and physician and professional services was narrowed by both increasing lower prices and decreasing higher prices to the existing 20th percentile and 80th percentile, the potential total savings for these two groups of services would be about \$267 million.

Quality Relativity and Price Relativity for Vaginal Delivery (DRG 560) by Hospital



Medicaid inpatient rates were consistently lower than the prices paid by private payers

Median Private Payer Price and Median Medicaid Price, by DRG and Severity of Illness					
Condition and Severity of Illness (SOI)	Private Payer Median Price	Medicaid Median Price	Private Payer Median Price as a % of Medicaid Median Price	Private Payer SOI Discharges as a % of Total DRG Discharges	Medicaid SOI Discharges as a % of Total DRG Discharges
Pneumonia (DRG 139)					
SOI 1	\$5,255	\$3,193	164.6	20.6	19.0
SOI 2	\$7,278	\$4,489	162.1	51.8	50.5
SOI 3	\$12,420	\$6,730	184.6	25.7	25.8
COPD (DRG 140)					
SOI 1	\$6,592	\$3,740	176.2	31.2	26.1
SOI 2	\$7,455	\$4,548	163.9	49.2	48.0
SOI 3	\$12,382	\$6,304	196.4	19.6	23.4
AMI (DRG 190)					
SOI 1	\$12,391	\$4,343	285.3	32.7	16.9
SOI 2	\$14,757	\$5,692	259.2	43.1	40.7
SOI 3	\$16,418	\$7,760	211.6	12.7	24.4
Vaginal Delivery (DRG 560)					
SOI 1	\$4,990	\$3,838	130.0	62.7	60.9
SOI 2	\$5,692	\$4,412	129.0	33.1	33.1
SOI 3	\$6,450	\$6,664	96.8	4.1	5.9

Deliveries were an exception; some hospitals received higher payments from Medicaid than from private payers

Private Pay Prices Compared to Medicaid Rates by Hospital for Vaginal Delivery (DRG 560)			
Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Severity-Adjusted Rate	Private Payer Price as a % of Medicaid Rate
Holyoke Hospital	\$ 3,430	\$ 4,013	85%
Cambridge Health Alliance	\$ 3,490	\$ 4,122	85%
Martha's Vineyard Hospital	\$ 3,530	\$ 4,141	85%
Heywood Hospital	\$ 3,658	\$ 4,136	88%
Lowell General Hospital	\$ 3,770	\$ 4,100	92%
Anna Jaques Hospital	\$ 3,780	\$ 4,072	93%
Mercy Medical Center	\$ 3,805	\$ 3,889	98%
Milford Regional Medical Center	\$ 3,821	\$ 4,225	90%
Brockton Hospital	\$ 3,874	\$ 4,084	95%
Sturdy Memorial Hospital	\$ 3,924	\$ 4,128	95%
.....			
North Shore Medical Center	\$ 5,371	\$ 4,219	127%
Beth Israel Deaconess Medical Center	\$ 5,413	\$ 4,677	116%
Berkshire Medical Center	\$ 5,580	\$ 4,494	124%
Fairview Hospital	\$ 5,651	\$ 3,979	142%
Cooley Dickinson Hospital	\$ 5,664	\$ 3,883	146%
U Mass Memorial Medical Center	\$ 5,781	\$ 4,696	123%
Brigham & Women's Hospital	\$ 5,943	\$ 4,931	121%
South Shore Hospital	\$ 5,955	\$ 4,098	145%
Massachusetts General Hospital	\$ 6,146	\$ 4,936	124%
Caritas St. Elizabeth's Medical Center	\$ 6,185	\$ 4,598	135%

Private payer prices paid for physician services were generally higher than Medicaid and Medicare

Private, Medicare, and Medicaid Prices for Professional Procedures (CPT Codes)						
CPT Code	CPT Description	Private Payer Median Price	Medicare Fee Schedule Rate	Private Payer Median Price as a % of Medicare Rate	Medicaid Fee Schedule Rate	Private Payer Median Price as a % of Medicaid Rate
99213	Office or other outpatient visit; established patient; low complexity	\$84	\$67	126%	\$49	173%
90806	Individual psychotherapy, 45 to 50 minutes face-to-face	\$ 81	\$98	82%	\$73	112%
97110	Therapeutic procedure	\$19	\$30	64%	\$13	150%
70535	MRI Brain with and w/o contrast	\$218	\$127	172%	\$91	241%
59400	Routine Maternity care including vaginal delivery	\$2,936	\$1,771	166%	\$2,045	144%
45378	Colonoscopy	\$546	\$413	132%	\$308	177%

No correlation between share of Medicaid patients and private payer price levels

Private Pay Prices Compared to Medicaid Rates by Hospital for Appendectomy (DRG 225)				
Hospital	Private Payer Severity-Adjusted Median Price	Medicaid Severity-Adjusted Rate	% of DRG-Specific Discharges that were Medicaid	% of All Discharges that were Medicaid
Lowell General Hospital	\$6,159	\$5,941	21%	28%
Lawrence General Hospital	\$6,718	\$6,253	20%	24%
Baystate Medical Center	\$7,025	\$6,324	34%	29%
Metrowest Medical Center	\$7,234	\$6,114	9%	15%
Saint Vincent Hospital	\$7,292	\$6,271	8%	14%
Mount Auburn Hospital	\$7,601	\$6,107	1%	8%
Caritas Norwood Hospital	\$7,640	\$5,954	5%	7%
Northeast Health Systems	\$7,915	\$6,111	9%	17%
Beth Israel Deaconess	\$8,424	\$6,552	4%	9%
Jordan Hospital	\$8,428	\$6,245	12%	10%
Newton Wellesley Hospital	\$8,794	\$6,150	9%	6%
Southcoast Health St. Lukes	\$9,129	\$6,044	27%	25%
South Shore Hospital	\$9,241	\$5,921	3%	6%
Cooley Dickinson Hospital	\$10,120	\$5,616	10%	13%
Massachusetts General	\$10,668	\$6,811	6%	11%
Brigham & Women's Hospital	\$10,779	\$6,744	7%	10%
Sturdy Memorial Hospital	\$10,898	\$6,171	10%	14%
Children's Hospital	\$11,889	\$7,590	8%	16%
Correlation of Private Payer Price Relativity with % of Discharges that were Medicaid			-0.15	-0.19
			0.02	0.03

Variation in Medicare prices was similar to private payers in breadth, not in ranking

Comparison of Hospital Price Relativity Rankings for Medicare and Private Payers				
Hospitals	Price Relativity for Medicare Price (non specific DRG)	Medicare Rank (1=lowest paid)	Price Relativity for Private Pay Price (DRG 560)	Private Payer Rank (1=lowest paid)
Cooley Dickinson Hospital	0.86	1	1.25	39
North Adams Regional Hospital	0.87	2	1.04	27
Emerson Hospital	0.88	3	1.01	24
Winchester Hospital	0.89	4	0.97	18
Baystate Franklin Medical Center	0.91	5	1.17	35
Caritas Norwood Hospital	0.92	6	0.90	10
South Shore Hospital	0.92	7	1.32	42
Sturdy Memorial Hospital	0.92	8	0.87	9
Jordan Hospital	0.92	9	0.98	19
Baystate Medical Center	1.22	36	1.03	26
Massachusetts General Hospital	1.32	37	1.36	43
Cambridge Health Alliance	1.33	38	0.77	2
U Mass Memorial Medical Center	1.36	39	1.28	40
Brigham & Womens Hospital	1.37	40	1.31	41
Caritas St. Elizabeths	1.42	41	1.37	44
Beth Israel Deaconess	1.45	42	1.20	37
Tufts Medical Center	1.53	43	1.03	25
Boston Medical Center	1.64	44	0.95	14
Minimum	0.86		0.76	
Maximum	1.64		1.37	
Ratio	1.91		1.80	
Correlation Coefficient on Ranks	0.1032			
R-squared	0.0106			

- For more information and copies of the reports, go to: www.mass.gov/dhcfp/costtrends
- The public hearings will be held at Bunker Hill Community College (250 New Rutherford Avenue, Boston, MA 02129) from June 27-30, 2011.